

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Claims 2, and 4-16 were pending in this application. In the Office Action, claims 2 and 4-16 were rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,974,662 to Eldridge, et al. ("Eldridge").

In this Amendment, claims 2 and 10 are amended. Claims 18-22, newly added in this Amendment, are believed to recite subject matter entirely within the scope of the original claims and are believed to be fully supported by the specification. For the reasons stated below, Applicants believe that the present Amendment will place all the pending claims in condition for allowance.

A distinguishing element of the present invention, recited in the amended independent claims 2 and 10, is a probe comprising a wire metallic core ("palladium alloy" in claim 2, "beryllium copper alloy" in claim 10) coated with a nickel (or nickel alloy) plating that is subject to wire drawing such that the cross-sectional area of the wire of the probes is reduced by about 70-75% during the wire drawing operation (claims 2 and 10: "followed by a wire drawing operation resulting in a wire cross-sectional area reduction of about 70-75%").

The wire drawing operation results in the ability to apply superior bending operations to the wire during probe formation and a superior shape recovering characteristic (page 10, first paragraph). In addition, the drawn wire has less surface irregularity than conventional non-drawn wire used for probes (page 12, line 8). The properties that result from the drawing of the

wire of the invention include superior spring characteristics and hardness as compared to conventional wire where no wire drawing operation is applied (page 11, first paragraph). As recited in newly added claim 18, this leads to the ability of the probe to withstand a higher contact force during operation compared with a conventional probe "wherein the probe sustains a substantially higher contact force as compared to a probe made of metal alloy wire that is not subject to the wire drawing operation" (see page 16, Table 1).

Due to the superiority in shape recovery properties, the probe position does not vary after repeated use (page 10, first paragraph). In addition, the probe diameter is controlled more accurately so that a narrower clearance can be maintained between the probe and the guide hole of a probe card.

The narrow diameter probe wires of accurately controlled diameter are suitable for inspecting IC chips having fine pitch, such as 100 μm , and can be made with a higher production rate, better quality, and higher yield rates.

Eldridge teaches use of core materials for probes in probe cards that include copper alloys and palladium metal for probe core materials (column 12, lines 37-39) and include nickel for probe "shell" materials (column 12, lines 56-59). However, Eldridge fails to disclose or suggest a probe that is made by plating nickel to palladium alloy wire, "followed by a wire drawing operation resulting in a wire cross-sectional area reduction of about 70-75%", as recited in claim 2. Similarly, Eldridge fails to disclose or suggest a probe that is made by plating nickel to copper beryllium alloy wire, "followed by a wire drawing operation resulting in a wire cross-sectional area reduction of about 70-75%," as recited in claim 10. Moreover, Eldridge does not teach the

feature of the present invention recited in claims 18, wherein a probe containing a nickel coated wire that is subject to a wire drawing process, sustains substantially higher contact force over that sustainable by conventional metal alloy probes. In fact, Eldridge is completely silent on this issue. Accordingly, Applicants respectfully submit that the present Amendment will render claims 2, 10 and 18 patentably distinct over Eldridge. Accordingly, upon entry of this Amendment, claims 2, 10, and 18 should be in condition for allowance. In addition, at least for their dependence on allowable claims, the remaining claims 4-9, 11-16, and 19-20 should also be allowable.

In view of the foregoing all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone applicants' undersigned representative at the number listed below.

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Respectfully submitted,

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